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Barron

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[54] **TOWED ARRAY ACOUSTIC PROJECTOR SHADING DEVICE**

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[52] **U.S. Cl.** **114/243**

[58] **Field of Search** ..... 114/243, 244, 114/242, 253; 385/102, 103, 104, 107; 174/105 R, 115, 126.2, 131 R, 120 R, 117 R, 119 R

[56] **References Cited**

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[57] **ABSTRACT**

A device for acoustically shading selected portions of the projected acoustic signal from an omnidirectional transducer array being towed through a fluid. The device consists of an acoustically transparent, cylindrical outer covering attached to the transducer array by means of bearing assemblies. The bearing assemblies allow the device to freely rotate about the array. Sound absorbing material is placed on the interior side of the covering along a top portion and a bottom portion of the circumference. The bottom portion is weighted so as to maintain the orientation of the device with respect to the surrounding fluid as the array twists or rotates. The sound absorbing material prevents or shades the acoustic signals projected from the array from striking and being reflected from the fluid surface and the bottom layer of the environment. The cylindrical shape of the device fits easily over existing circular shaped towed arrays and also minimizes hydrodynamic drag as the array is towed through the fluid.

10 Claims, 1 Drawing Sheet